

**METHODS OF SELECTIVELY BUMPING AN INTEGRATED CIRCUIT
SUBSTRATE AND RELATED STRUCTURES**

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ABSTRACT

Bumping a substrate having a metal layer thereon may include forming
a barrier layer on the substrate including the metal layer and forming a
conductive bump on the barrier layer. Moreover, the barrier layer may be
10 between the conductive bump and the substrate, and the conductive bump
may be laterally offset from the metal layer. After forming the conductive
bump, the barrier layer may be removed from the metal layer thereby
exposing the metal layer while maintaining a portion of the barrier layer
between the conductive bump and the substrate. Related structures are also
15 discussed.